

### **REMARKS**

This is a full and timely response to the outstanding Action mailed July 27, 2004. Upon entry of the amendments in this response, claims 1 – 5 and 7 - 19 remain pending. In particular, Applicant has amended claims 1 and 9 - 11, and has canceled claim 6 without prejudice, waiver, or disclaimer. Applicant has canceled claim 6 merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicant reserves the right to pursue the canceled subject matter in a continuing application, if Applicant so chooses, and does not intend to dedicate the canceled subject matter to the public. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### **Indication of Allowable Subject Matter**

The Office Action indicates that claims 6, 9 – 11 and 17 – 19 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As set forth above, Applicant has re-written claims 9 – 11 in independent form, and has amended claim 1 to include the features/limitations previously recited in claim 6. Therefore, Applicant respectfully asserts that these claims are in condition for allowance. As set forth below, Applicant respectfully asserts that the rejection of claim 15, which serves as the base claim for claims 17 – 19, is improper and that these claims are in condition for allowance without amendment.

## **Rejections under 35 U.S.C. 102**

The Office Action indicates that claims 1 – 5, 7, 8 and 12 – 16 stand rejected under 35 U.S.C. 102(b) as being anticipated by *Maria Verhaege et al.* (2002/0033507). As set forth above, Applicant has amended claim 1 to include the features/limitations previously recited in claim 6, the allowability is stated in the Office Action. Therefore, Applicant respectfully asserts that the rejection as to claim 1 and dependent claims 2 – 5, 7, 8, and 12 – 14 has been rendered moot, and that these claims are in condition for allowance. With respect to claims 15 and 16, Applicant respectfully traverses the rejection.

In this regard, claim 15 recites:

15. An ESD protection circuit with high substrate-triggering efficiency formed on a substrate of a second conductivity comprising:  
**a guard ring** of the second conductivity formed on the substrate as a contact region thereof;  
**a plurality of fingers enclosed by the guard ring**, each of which has a finger source formed by a first doping region of a first conductivity, a finger drain formed by a second doping region of the first conductivity and coupled to a pad, a finger gate between the first and second doping region, and **a substrate current input node formed by a third doping region of the second conductivity enclosed by the second doping region**, wherein the first and second doping region, and the proximate substrate form a parasitic BJT;  
a plurality of resistors formed by wells, each of which is coupled between one of the finger sources and a power line; and  
internal connection circuits coupling one of the finger sources to one of the substrate current input nodes to activate a second parasitic BJT by current flowing through a first parasitic BJT and one of the resistors coupled thereto during an ESD event.

*(Emphasis Added).*

Applicant respectfully asserts that *Maria Verhaege* is legally deficient for the purpose of anticipating claim 15. Specifically, Applicant respectfully asserts that *Maria Verhaege*

does not teach or otherwise disclose at least the features/limitations emphasized above in claim 15. In this regard, Fig. 10 of *Maria Verhaege* discloses that there are a plurality of guard rings (910), with each guard ring (910) being formed between a finger source (904) and a finger drain (902). Thus, there is not a plurality of fingers enclosed by the guard ring. Additionally, *Maria Verhaege* discloses a plurality of fingers, each of which only has a finger source (904), a finger drain (902), a finger gate (906). Thus, there is not a substrate current input node formed by a third doping region of the second conductivity enclosed by the second doping region. Therefore, Applicants respectfully assert that claim 15 is in condition for allowance.

Since claims 16 – 19 are dependent claims that incorporate all the features/limitations of claim 15, Applicant respectfully asserts that these claims also are in condition for allowance. Additionally, these claims recite other features/limitations and combinations thereof that may serve as an independent basis for patentability.

#### **Cited Art Made of Record**

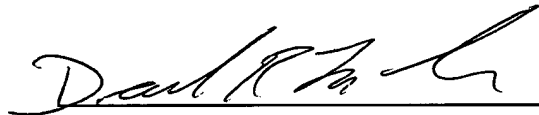
The cited art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

## **CONCLUSION**

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this amendment and response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,



---

**Daniel R. McClure, Reg. No, 38,962**

**THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.**  
Suite 1750  
100 Galleria Parkway N.W.  
Atlanta, Georgia 30339  
(770) 933-9500